

In the claims:

1. (original) A method for frequency conversion of a non-polarized optical light beam, comprising:
splitting a beam into two orthogonally polarized beams;
forming said polarized beams and rotating their polarizations; and
pumping an optical frequency converter with said polarized beams.
2. (original) A method for frequency conversion of a non-polarized optical light beam, comprising jointly pumping one, type II phase matched frequency conversion process with two orthogonally polarized beams.
3. (currently amended) The method according to claim 1 ~~or claim 2~~, further comprising placing an optical isolator in the beam path such as to prevent reflection-returned light from entering into the pump laser.
4. (currently amended) The method according to claim 1 ~~or claim 2~~, wherein both beams are focused together into one spot within the frequency converter so as to generate one converted beam.
5. (currently amended) The method according to claim 1 ~~or claim 2~~, wherein the frequency converter comprises a non-linear crystal placed within a cavity, and the common cavity is pumped by said polarized beams.
6. (currently amended) The method according to claim 1 ~~or claim 2~~, further comprising combining the two generated polarized beams into one beam by means of a polarization beam combiner.
7. (original) Apparatus for frequency conversion of a non-polarized optical light beam, comprising:
a beam splitter adapted to split a beam into two, orthogonally polarized beams;
beam forming optics adapted to form said polarized beams and rotate their polarizations; and
an optical frequency converter pumped with said polarized beams.
8. (original) Apparatus according to claim 7, wherein said beam splitter comprises a beam displacer polarizer.
9. (original) Apparatus according to claim 7, wherein said beam forming optics comprises a half-lambda retarding wave plate, placed into one beam path such as to rotate its polarization by 90°.
10. (new) The method according to claim 2, further comprising placing an optical isolator in the beam path such as to prevent reflection-returned light from entering into the pump laser.

11. (new) The method according to claim 2, wherein both beams are focused together into one spot within the frequency converter so as to generate one converted beam.
12. (new) The method according to claim 2, wherein the frequency converter comprises a non-linear crystal placed within a cavity, and the common cavity is pumped by said polarized beams.
13. (new) The method according to claim 2, further comprising combining the two generated polarized beams into one beam by means of a polarization beam combiner.